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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,370	09/10/2003	Takashi Yamazaki	008312-0305862	3316

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EXAMINER	
PONTAINE, MONICA A	

ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/658,370	YAMAZAKI ET AL.	
	Examiner	Art Unit	
	Monica A. Fontaine	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *091003,081604,010505*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 3 is objected to because of the following informalities: It is believed that line 13 is missing the phrase --falls outside-- between the words "value" and "the". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 are rejected under 35 USC 102(e) as being anticipated by Stirn (U.S. Patent 6,533,972).

Regarding Claim 1, Stirn shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector-pin driving motor versus time when a molded product is normally removed (Column 5, lines 39-52; Column 6, lines 3-13, 27-28); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Column 6, lines 3-6, 27-28; Column 7, lines 47-58); and monitoring a

torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zone, and raising an alarm (Column 6, lines 58-65).

Regarding Claim 2, Stirn shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector-pin driving motor versus time when a molded product is normally removed (Column 5, lines 39-52; Column 6, lines 3-13, 27-28); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Column 6, lines 3-6, 27-28; Column 7, lines 47-58); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zone, and counting the number of malfunctions (Column 6, lines 36-49); and raising an alarm when the number of malfunctions in a single ejection step reaches a predetermined number (Column 6, lines 58-65).

Regarding Claim 3, Stirn shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector-pin driving motor versus time when a molded product is normally removed (Column 5, lines 39-52; Column 6, lines 3-13, 27-28); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Column 6, lines 3-6, 27-28; Column 7, lines 47-58); and monitoring a

torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value [falls outside] the upper and lower limits of the monitoring zone, and counting the number of malfunctions (Column 6, lines 36-49); and raising an alarm when the number of malfunctions occurring within a predetermined time reaches a predetermined number (Column 6, lines 58-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-6 are rejected under 35 USC 103(a) as being unpatentable over Stirn.

Regarding Claim 4, Stirn shows that it is known to carry out a method of detecting a malfunction in hydraulic injection molding machine (Column 4, lines 28-32), the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector-pin driving motor versus time when a molded product is normally removed (Column 5, lines 39-52; Column 6, lines 3-13, 27-28); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Column 6, lines 3-6, 27-28; Column 7, lines 47-58); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zone, and raising an alarm (Column 6, lines 58-65). Stirn does not explicitly

discuss his invention in terms of hydraulic pumps. However, it is noted that monitoring the hydraulic pressure of a hydraulic pump would be functionally equivalent to monitoring the torque of an electric motor (i.e. both variables affect the advancing of the ejector pin). Furthermore, it is well settled that a reference must be considered for not only what it expressly teaches, but also for what it fairly suggests and that the entirety of the reference disclosure, including unpreferred embodiments, must be considered in determining obviousness. *In re Burckel* 592 F.2d 1175, 201 USPQ 67; *In re Lamberti* 542 F.2d 747 USPQ 278. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to monitor hydraulic pressure of a hydraulic pump as suggested by Stirn, as an equivalent technological process to his monitoring of torque, in order to perform the injection molding process using variable equipment.

Regarding Claim 5, Stirn shows that it is known to carry out a method of detecting a malfunction in a hydraulic injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector-pin driving motor versus time when a molded product is normally removed (Column 5, lines 39-52; Column 6, lines 3-13, 27-28); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Column 6, lines 3-6, 27-28; Column 7, lines 47-58); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zone, and counting the number of malfunctions (Column 6, lines 36-49); and raising an alarm when the number of malfunctions in a single ejection step reaches a predetermined number (Column 6,

lines 58-65). Stirn does not explicitly discuss his invention in terms of hydraulic pumps. However, it is noted that monitoring the hydraulic pressure of a hydraulic pump would be functionally equivalent to monitoring the torque of an electric motor (i.e. both variables affect the advancing of the ejector pin). Furthermore, it is well settled that a reference must be considered for not only what it expressly teaches, but also for what it fairly suggests and that the entirety of the reference disclosure, including unpreferred embodiments, must be considered in determining obviousness. *In re Burckel* 592 F.2d 1175, 201 USPQ 67; *In re Lamberti* 542 F.2d 747 USPQ 278. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to monitor hydraulic pressure of a hydraulic pump as suggested by Stirn, as an equivalent technological process to his monitoring of torque, in order to perform the injection molding process using variable equipment.

Regarding Claim 6, Stirn shows that it is known to carry out a method of detecting a malfunction in a hydraulic injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector-pin driving motor versus time when a molded product is normally removed (Column 5, lines 39-52; Column 6, lines 3-13, 27-28); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Column 6, lines 3-6, 27-28; Column 7, lines 47-58); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value [falls outside] the upper and lower limits of the monitoring zone, and counting the number of malfunctions (Column 6, lines 36-49); and raising an alarm when the number of malfunctions occurring within a predetermined time reaches a predetermined number

(Column 6, lines 58-65). Stirn does not explicitly discuss his invention in terms of hydraulic pumps. However, it is noted that monitoring the hydraulic pressure of a hydraulic pump would be functionally equivalent to monitoring the torque of an electric motor (i.e. both variables affect the advancing of the ejector pin). Furthermore, it is well settled that a reference must be considered for not only what it expressly teaches, but also for what it fairly suggests and that the entirety of the reference disclosure, including unpreferred embodiments, must be considered in determining obviousness. *In re Burckel* 592 F.2d 1175, 201 USPQ 67; *In re Lamberti* 542 F.2d 747 USPQ 278. Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to monitor hydraulic pressure of a hydraulic pump as suggested by Stirn, as an equivalent technological process to his monitoring of torque, in order to perform the injection molding process using variable equipment.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,669,877. Although the

conflicting claim is not identical, it is not patentably distinct from each other because the '877 claim is fully encompassed by the instant claim 1.

Claim 4 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 5 of U.S. Patent No. 6,669,877. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '877 claims are fully encompassed by the instant claim 4.

Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/636621. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '621 claim is fully encompassed by the instant claim 1.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim 4 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3 and 7 of copending Application No. 10/636621. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '621 claims are fully encompassed by the instant claim 4.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with regard to malfunction detecting processes in general:

U.S. Patent 6,673,282 to Matsubayashi et al.

U.S. Patent 5,942,658 to Donovan et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Fontaine whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maf
May 16, 2005

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER